

NOTES ON COLOR AND PATTERN OF EYE IN DIPTERA. II.¹

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The following notes continue those previously published on flies of the families Stratiomyidae, Aulacigastridae, and Otitidae. An example of the taxonomic indications to be found in the eye pattern will be seen below in the resemblance in the patterns between *Odinia boletina* and *Traginops irrorata*, the latter long considered to belong to the Agromyzidae. Specific distinctions in the Stratiomyidae will doubtless become of increasing value as data accumulates.

All material was killed in chloroform vapor and captured in southern Michigan, unless otherwise indicated.

BRACHYCERA ORTHORRHAPHA

Dolichopodidae

Hydrophorus agalma Wheeler, ♂ ♀. Eye plain olive-green.

H. amplectens Aldrich, ♂ ♀. Eye olive-green with small, indistinctly delimited, dorsal area of purple.

H. chrysologus Walker, ♂ (Fig. 1). Eye brownish green with a purple dorsal area and a purple antedorsal band separated by a green area.

Plagioneurus univittatus Loew, ♂ ♀ (Fig. 2). Eye green, becoming coppery dorsally and with a small area of indigo at ventral edge.

Empididae

Leptopeza compta Coq., ♀. Eye plain deep purple.

Rhamphomyia longicauda Loew, ♂ ♀. Eye plain dark olive-green.

Erinnidae

Sotva pallipes Loew, ♂ ♀. Eyes plain greenish black.

Xylomyia americana Wied., ♂. Eyes plain dark olive-green.

Rhagionidae

Chrysopilus quadratus Say, ♂ ♀. Eye in female plain olive-green, in male with enlarged dorsal ommatidia dark brown, the lower smaller ommatidia olive-green.

Rhagio vertebratus Say, ♀. Eye olive-green with purplish cast, especially anteriorly.

¹ For Paper I see this Bulletin, vol. 44 (5): 163-164 (1949).

Omphralidae (Scenopinidae)

Omphrale fenestralis L., ♂ ♀ (Fig. 3). Eye very dark olive with mid-longitudinal stripe of deep purple.

Stratiomyidae

Actina viridis Say, ♀. Eye plain dark olive-green.

Berkshiria albistylum Jns., ♂ (Fig. 4). Rather different from female (v. Paper I, p. 163, fig. 1A); brownish green in ground color with green horizontal band edged broadly with purple and with isolated purple clouds in upper and lower parts, the cloud in lower part quite faint.

Eulalia (= *Odontomyia*) *cincta* Oliv., ♀ (Fig. 5). Eye brownish olive in ground color, with horizontal band of reddish purple edged with blue.

E. pilimana Loew, ♂ ♀ (Figs. 6, 7). In male as in Figure 6, ground color olive-green, with horizontal band of bluish purple edged with reddish; in female as in *E. virgo* (v. i., figure 7).

E. virgo Wied., ♀ (Fig. 7). Ground color olive-green, with purplish tinge dorsally and posteroventrally; horizontal band bluish purple edged with reddish.

Eupachygaster punctifer Malloch, ♂ (Fig. 8). Eye green in ground color with purple vertical fasciae as shown. The fasciae are not edged with a different color as in *E. henshawi* (v. Paper I, p. 163, Fig. 1B).

Euparyphus tetraspilus Loew, ♀ (Fig. 9). Eye olive-green in ground color, with purple glint ventrally. Two wide horizontal bands are green, broadly edged with red.

Hedriodiscus vertebratus Say (*Odontomyia*), ♀ (Fig. 10). Eye olive-green in ground color, with purplish brown horizontal band and with large anterodorsal spot of dark brownish olive broadly edged with indigo.

Ptecticus sackeni Will., ♂ ♀. Eye plain bright green with coppery reflections.

P. trivittatus Say, ♂ ♀. Eye plain green with bronzy to bluish reflections anteriorly.

Sargus elegans Loew, ♂ ♀. Eye plain green.

Stratiomys badius Wlk., ♀ (Fig. 11). Eye bluish black in ground color, with two wedge-shaped marks, broadest anteriorly, of bronzy olive-green edged with blue.

S. meigenii Wied., ♂ ♀ (Figs. 12, 13). Eye in female (Fig. 12) deep indigo in ground color, almost black dorsally and ventrally, with two horizontal bands, not reaching occipital margin, of golden green edged with blue; in male (Fig. 13) the ground color is

olive-green with one horizontal band and the lowermost part dark indigo.

S. norma Wied., ♀ (Fig. 14). Eye dark purple in ground color, with two horizontal bands of olive-green edged with blue.

ACALYPTRATAE

Agromyzidae

Cerodonta dorsalis Loew, ♂ ♀. Eyes plain rich purple.

Chamaemyiidae

Chamaemyia juncorum Fallén (*polystigma* Mg.), ♀. Eye plain reddish purple with green reflections.

Plunomia flavicornis Malloch and *P. transversa* Malloch, ♂ ♀. Eye plain olive-green.

Chloropidae

Ceratobarys eulophus Loew, ♂ ♀, Florida. Eye plain reddish purple.

Ectecephala sulcata Sabrosky, ♂ ♀. Eye plain olive-green.

Clusiidae

Clusia lateralis Wlk., ♀. Eye plain reddish brown with greenish overcast.

Clusiodes melanostoma Loew, ♀. Eye brown with greenish overcast.

Heteromeriingia nitida Jns., ♂ ♀. Eye plain dark purple with greenish reflections on anterior enlarged ommatidia.

Sobarocephala flava Mel. and Argo, ♀, and *S. flaviseta* Jns., ♂ ♀. Eye plain brownish purple to purplish red.

Diastatidae

Diastata repleta Wlk., ♂. Eye plain bluish purple with green reflections.

Drosophilidae

Stegana coleoptrata Scop., ♀ (Fig. 15). Eye dull purplish red in ground color, becoming maroon at each side of a moderately wide horizontal band of bluish violet.

Ephydridae

Hyadina furva Cresson (*Lytogaster*), ♀ (Fig. 16). Eye purple in dorsal one-third, green in ventral two-thirds.

Hydrellia griseola Fallén, var. *obscuriceps* Loew, ♀ (Fig. 17). Eye green dorsally and posteriorly, most of ventral part purple.

H. griseola Fallén, var. *scapularis* Loew, ♂ ♀. Eye olive-green to coppery grading to bright green on lower front side.

Helomyzidae

Amoebaleria defessa O.S., ♀. Eye plain dull brownish green.

Suillia quinquepunctata Say, ♂ ♀. Eye reddish brown with greenish overcast.

Lauxaniidae

Homoneura citreifrons Malloch, ♂. Eye bright green, a little bronzy reddish dorsally.

Minettia ordinaria Melander, ♀. Eye dark green, becoming purplish at edges.

Sapromyza browni Shewell, ♂. Eye plain dark brown with green reflections.

Milichiidae

Milichiella populi Steyskal, ♂. Eye plain dull brownish red with greenish reflections.

Pholeomyia indecora Loew, ♀. Eye plain dark brown with greenish overcast.

Odiniidae

Odinia boletina Zett., ♀ (Fig. 18). Eye brownish purple with greenish tinge, becoming plain green at each side of a horizontal purple band.

Traginops irrorata Coq., ♀ (Fig. 19). Eye with two horizontal bands of green, the upper one the broader; between and dorsad of the bands, purple; ventrad of the bands, blue.

Otitidae

Callopietromyia annulipes Macq., ♂ ♀. Eye plain olive-green.

Delphinia picta Fabr., ♀ (Fig. 20). Eye olive-green ventrally, a little above middle sharply becoming purple, then gradually shading dorsally into olive suffused with purple.

Herina ruficeps v.d.W., ♀. Eye plain dark olive-green.

Pterocalla strigula Loew, ♂ ♀. Eye plain brownish with greenish reflection.

Eumetopiella rufipes Macq., ♂. Eye plain dark red.

Euxesta pechumani Curran, ♀. Eye plain reddish purple with greenish glint.

Seioptera vibrans L., ♂ ♀. Eye plain dull red with greenish reflection.

Piophilidae

Piophila foveolata Mg. (*nigriceps* Mg.), ♂. Eye plain dark green.

P. latipes Mg., ♂♀. Eye plain dark red-brown with greenish cast.

Psilidae

Chyliza apicalis Loew, ♂♀. Similar to *C. notata* (v.i.), but the ground color wholly brownish green and the indistinctly delimited stripe bluish green.

C. notata Loew, ♂♀ (Fig. 21). Eye in ground color brownish green below, more brownish toward occiput, or even reddish in male, dorsally reddish brown, across middle of eye with indistinctly delimited horizontal band of plain green, broadening anteriorly.

Pseudopsila collaris Loew, ♀. Eye plain reddish purple.

Loxocera cylindrica Say, ♂♀. Eye plain dark red.

Tanypezidae

Tanypeza luteipennis Dyar and Knab, ♀. Eye plain dark red.

Tylidae

Rainieria antennaepes Say, ♀. Eye plain dark red.

Taeniptera trivittata Macq., ♂♀, Florida (Fig. 22). Eye green in ground color, dorsally with dark purple markings as figured.

Trypetidae

Euaresta bella Loew, ♂♀. Eye bright metallic yellow-green.

Eutreta sparsa Wied., ♂ (Fig. 23). Eye in ground color reddish purple with a tinge of golden green at dorsal and ventral extremities and crossed by three complete horizontal bands of golden green.

Neaspilota alba Loew, ♂♀. Eye plain golden green.

N. albidipennis Loew and *N. vernoniae* Loew, ♂♀. Eye plain metallic green when viewed obliquely, with strong coppery sheen when viewed perpendicularly to surface.

Orellia palposa Loew, ♂. Eye plain golden green.

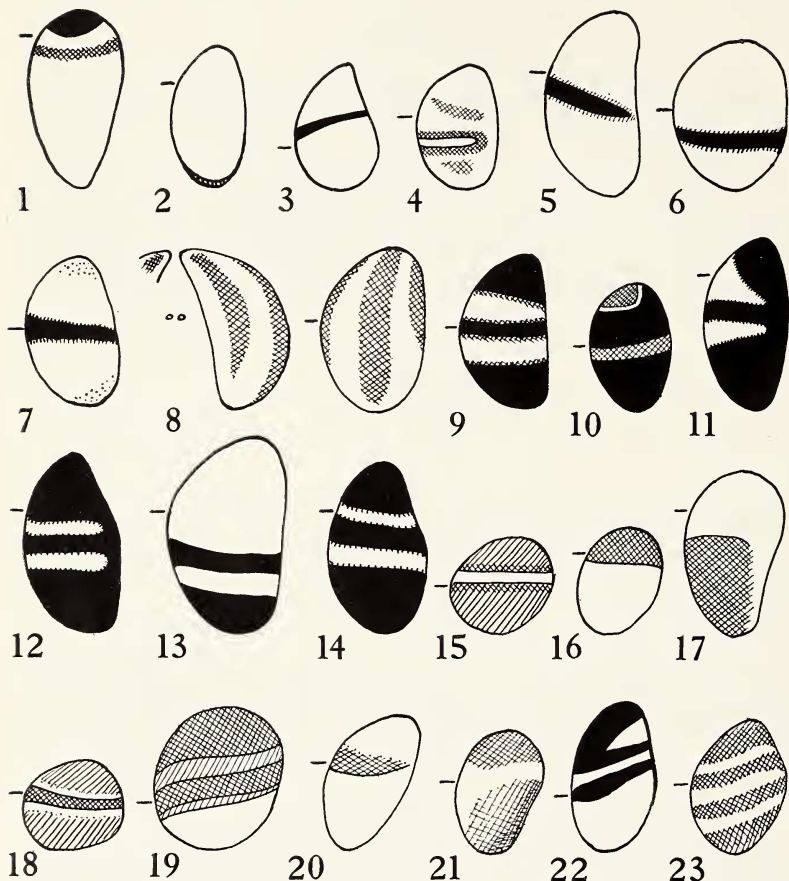
Proceidochares atra Loew, ♀. Eye with three vertical fasciae of approximately equal width and also a partial stripe occupying anterior angle of eye. The posterior or first stripe is purple with a bluish glint, the second is green and tapers to lower and upper margins of eye, the third is much like the first but more reddish and with less blue reflection, and the anterior area is green, which color also invades the anterior edge of the third fascia in tiny spots.

Rhagoletis tabellaria Fitch, ♂♀. Eye plain bright green with coppery and bluish reflections.

Tomoplagia obliqua Say, ♀. Eye plain bright green with some coppery reflection.

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PLATE VIII



Eye Patterns of Freshly Killed Diptera. Profile of left eye, with point of attachment of antennae indicated by dash. Fig. 1. *Hydrophorus chrysológus* Wlk., ♂; 2. *Plagioneurus univittatus* Lw., ♂♀; 3. *Omphrale fenestralis* L., ♂♀; 4. *Berkshiria albistylum* Jns., ♂; 5. *Eulalia cincta* Oliv., ♀; 6. *E. pilimana* Lw., ♂; 7. *E. virgo* Wd., ♀; 8. *Eupachygaster punctifer* Mall., ♂, anterior and profile views; 9. *Euparyphus tetraspilus* Lw., ♀; 10. *Hedriodiscus vertebratus* Say, ♀; 11. *Stratiomys badius* Wlk., ♀; 12. *S. meigenii* Wd., ♀; 13. *idem*, ♂; 14. *S. norma* Wd., ♀; 15. *Stegana coleoptrata* Scop., ♀; 16. *Hyadina furva* Cr., ♀; 17. *Hydrellia griseola* Flln., var. *obscuriceps* Lw., ♀; 18. *Odinia boletina* Zett., ♀; 19. *Traginops irrorata* Coq., ♀; 20. *Delphinia picta* F., ♀; 21. *Chyliza notat* Lw., ♂♀; 22. *Taeniptera trivittata* Macq., ♂♀; 23. *Eutreta sparsa* Wd., ♂.